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MBA PROFESSIONAL REPORT

**The Impact of the Medicare-Eligible Retiree Health Care Fund
on Navy Military Treatment Facilities'
Demand-to-Capacity Solution**

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March 2012**

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FUND ON NAVY MILITARY TREATMENT FACILITIES' DEMAND-TO-
CAPACITY SOLUTION**

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THE IMPACT OF THE MEDICARE-ELIGIBLE RETIREE HEALTH CARE FUND ON NAVY MILITARY TREATMENT FACILITIES' DEMAND-TO-CAPACITY SOLUTION

ABSTRACT

The Medicare-Eligible Retiree Health Care Fund (MERHCF) covers the medical benefits provided to Medicare-eligible retirees and dependents of the uniformed services. A comparative analysis of two Navy Military Treatment Facilities identified the impacts of MERHCF on their respective demand-to-capacity solutions. The common elements of a Health Care Requirement Analysis (HCRA) and best business practices were used to show the challenges of MTFs in providing medical care to an increasing population and health care of Medicare-eligible military retirees and their families. The analysis showed that MERHCF provides an opportunity for Navy MTFs to maximize the reimbursement and recapture outsourced patrons by optimizing the effectiveness and cost efficiency of staffing and resources to deliver healthcare for the maximum number of beneficiaries.

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LIST OF ACRONYMS AND ABBREVIATIONS

AD	Active Duty
ADFM	Active Duty Family Member
AFMS	Air Force Medical Services
APF	Annual Planning Figure
APG	Ambulatory Procedure Group
AHLTA	Armed Forces Health Longitudinal Technology Application
ATC	Access to Care
BDC	Branch Dental Clinic
BHC	Branch Health Clinic
BRAC	Base Realignment and Closure
BUMED	Bureau of Medicine and Surgery
CHCS	Composite Health Care System
DEERS	Defense Eligibility Enrollment Reporting System
DFAS	Defense Finance Accounting System
DHP	Defense Health Program
DoD	Department of Defense
ENT	Eyes, Nose, & Throat
FTE	Full Time Equivalent
FY	Fiscal Year
HA	Health Affairs
HCFA	Health Care Financing Administration
HCRA	Health Care Requirements Analysis
IDC	Independent Duty Corpsman
LDRP	Labor Delivery Recovery & Post Partum
LOE	Level of Effort
MCAGCC	Marine Corps Air Ground Combat Center
MDR	MHS Data Repository
MERHCF	Medicare-Eligible Retiree Health Care Fund
MEPRS	Medical Expense Personnel Reporting System
MHS	Military Health System

MHSS	Military Health Service System
M2	MHS MART (Management Analysis and Reporting Tool)
MILPERS	Military Personnel
MIU	Maternal Infant Unit
MSU	Multi-Service Unit
MTF	Military Treatment Facility
NASL	Naval Air Station Lemoore
NDAA	National Defense Authorization Act
NHL	Naval Hospital Lemoore
NHTP	Naval Hospital Twentynine Palms
NMAU	Navy Medical Administrative Unit
OASD	Office of the Assistant Secretary of Defense
OUSD	Office of the Under Secretary of Defense
PBAM	Performance Based Adjustment Model
PBB	Performance Based Budgeting
PDTS	Pharmacy Data Transaction System
PHI	Population Health Improvement
PPS	Prospective Payment System
RET	Retired
RETFM	Retired Family Members
RVU	Relative Value Unit
RWP	Relative Weight Product
SADR	Standard Ambulatory Data Record
SIDR	Standard Inpatient Data Record
TFL	TRICARE for Life
TOC	TRICARE Operation Center
TMA	TRICARE Management Activity
TSBPT	Tri-Service Business Planning Tool
USC	United States Code
UMP	Unified Medical Program
USFHP	Uniformed Services Federal Health Plan

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EXECUTIVE SUMMARY

The primary missions of the Department of Defense's (DoD) Military Health System are: (1) To maintain the health of military personnel so they can carry out their military mission, and (2) to be prepared to deliver health care required during wartime, which is described as the medical readiness mission. Although the Military Health System is the primary source of medical services to active duty service members, it is also a major source of medical care, in both military and civilian facilities, to the dependents of active duty personnel, military retirees and their dependents, and survivors of deceased service members.

The Military Health System budget funding has traditionally been appropriated in several places such as the Defense Health Program (DHP), military personnel, medical military construction, and the Medicare-Eligible Retiree Healthcare Fund (MERHCF). The MERHCF covers Medicare-eligible retirees, retiree family members, and survivors only regardless of age or Medicare Part B enrollment status. The MERHCF is not identical to TRICARE for Life (TFL), which covers Medicare-eligible non-Active Duty beneficiaries age 65 and above enrolled in Medicare Part B. For example, the MERHCF covers Military Treatment Facility (MTF) care and Uniformed Services Family Health Plan (USFHP) costs, whereas TFL does not.

From fiscal year (FY) 2007 to fiscal year 2009, total MERHCF expenditures increased by fifteen percent from \$6,770 million to \$7,818 million. Direct or MTF care expenses for MERHCF increased by 7 percent and purchased care MERHCF expenditures increased substantially by 15 percent. For FY 2009, total MTF care MERHCF expenditures were \$1,691 million while purchased care was \$6,127 million, or 22 percent of the total MERHCF expenditures (Military Health Systems, 2010).

A comparative analysis of two Navy Military Treatment Facilities identified the impacts of MERHCF on their respective demand-to-capacity solution. The common elements of a Health Care Requirement Analysis (HCRA), market-based business planning and best business practices were used to show the challenges of MTFs in

providing medical care to an increasing population and health care cost of Medicare-eligible military retirees and their families. The analysis showed that MERHCF provide an opportunity for Navy MTFs to maximize reimbursement and recapture outsourced patrons by optimizing the effectiveness and cost efficiency of staffing and resources to deliver healthcare for the maximum number of beneficiaries.

I. INTRODUCTION

A. PURPOSE OF THIS STUDY

The purpose of this study is to provide an analysis of the impact of the Medicare-Eligible Retiree Health Care Fund (MERHCF) on Navy Military Treatment Facilities' (MTF) Demand-to-Capacity Solution. In this study, the researcher highlights the effects of MERHCF to the business practices of the MTFs in maximizing the MERHCF reimbursement and optimizing the utilization of MTF's resources.

B. RESEARCH QUESTIONS

1. How can Military Treatment Facilities maximize MERHCF reimbursements?
2. How does MERHCF affect the MTF's business plan?
3. What are the short and long term effects of retiree's enrollments at MTFs?

C. METHODOLOGY

Research methodologies used include: Interview (phone call and e-mail) with LCDR Thomas Piner (NHL, Comptroller), ENS Andrea Watling (NHL, Business and Clinic Manager), LCDR Fitzgerald Wheeler (NHTP, Comptroller), LTJG William Lawson (NHTP, Data Analyst), LCDR Thomas Bui (Navy Medicine West (NMW), Deputy Comptroller); literature review of DoD and MHS instructions, manuals, policies, reports, reports that pertains to MERHCF, and studies on MTF business operations; analysis of business plans, workload data, and MERHCF reimbursements of NHL and NHTP.

The research methodology used in this project is a comparative approach in providing data and business operation analysis of two Navy MTFs. The selected MTFs are categorized as small-size Navy medical facilities and geographically located in remote areas of California (Lemoore and Twentynine Palms California). Both MTFs have

inpatient, outpatient, and limited specialty support capabilities but with different enrollment policy on military retirees and their family members. The study will use common elements of Health Care Requirements Analysis (HCRA), market-based business planning and best business practices to show its relationship with the health care cost provided to Medicare-eligible military retirees and their families. Prior to the research a thorough literature review was conducted in examining the laws and instructions that govern MERHCF, and the calculation of MERHCF reimbursements to MTFs.

D. LIMITATIONS OF RESEARCH

The analysis provided in this project focuses on the enrollment of Medicare-eligible beneficiaries at Navy MTF, their utilization of MTF services, and the MERHCF reimbursements received by the MTFs for the health care services provided to them. The descriptive analysis is also limited to the information and data acquired from NHL, NHTP, and DoD databases.

II. BACKGROUND

A. MERHCF

1. MERHCF History and Operations

The Floyd D. Spence National Defense Authorization Act (NDAA) for Fiscal Year 2001 contained a provision extending TRICARE coverage to Medicare-eligible members or former members of the uniformed services (and their Medicare-eligible dependents and survivors) entitled to retired or retainer pay. Specifically, U.S. Code (U.S.C.) Chapter 56, Title 10, established the Department of Defense (DoD) Medicare-Eligible Retiree Health Care Fund (the “Fund” or MERHCF), administered by the Secretary of Treasury. The purpose of the MERHCF is to accumulate funds needed to finance an actuarially sound basis liabilities associated with uniformed services retiree health care programs for Medicare-eligible beneficiaries. Medical benefits were provided to Medicare-eligible retirees and dependents of the uniformed services beginning October 2001, and the MERHCF was established October 2002. Prior to this date, care for Medicare-eligible beneficiaries was financed through annual Congressional appropriations for space available care in Military Treatment Facilities (MTFs).

The NDAA also established an independent three-member DoD Medicare-Eligible Retiree Health Care Board of Actuaries appointed by the Secretary of Defense. The Board is required to review the actuarial status of the Fund, to report annually to the Secretary of Defense, and to report to the President and the Congress on the status of the Fund at least every four years. The DoD Office of Actuary provides all technical and administrative support to the Board. Within DoD, the Office of the Under Secretary of Defense (OUSD) for Personnel and Readiness (P&R), through the Office of the Assistant Secretary of Defense (OASD) for Health Affairs (HA) TRICARE Management Activity (TMA), has as one of its missions operational oversight of the Defense TRICARE Health Delivery System, including management of the Fund. TMA management responsibilities include accounting for, documenting, and projecting annual budget distribution

requirements (both purchased care claims and MTF prospective payments for anticipated care provided in the direct care system), oversight of claims processors, monitoring or management of Improper Payments Information Act, and preparation of financial statements and footnotes. The Defense Finance and Accounting Service (DFAS) provide accounting and investment services for the Fund (Department of Defense, 2009).

2. MERHCF Funding Sources

The primary financing sources for MERHCF are (1) an annual unfunded actuarial liability payment from the U.S. Treasury, (2) annual contributions from Military Services and other Uniformed Services (U.S. Coast Guard, National Oceanic and Atmospheric Administration, and U.S. Public Health), and (3) interest earned on investments. Using methods and assumptions approved by the DoD Board of Actuaries, the DoD Office of the Actuary calculates the annual unfunded liability amount, which represents the amortization of the unfunded liability for service performed before October 1, 2002, as well as the amortization of subsequent actuarial gains and losses. This unfunded liability also includes Medicare liabilities for all Uniformed Services. The Uniformed Services contributions represent the amount contributed by Treasury on behalf of the Uniformed Services at the beginning of each fiscal year. The contribution rates, which are determined by the DoD Retirement Board of Actuaries, are based on DoD Retirement Board of Actuaries approved per capita normal cost rates and expected average strengths for the Uniformed Services. Contributions to the MERHCF are calculated to maintain the Fund on an actuarially sound basis. This means there will be sufficient funds to make all benefit payments to eligible recipients each year, and the Fund balance is projected to eventually equal the actuarial liability, i.e., all unfunded liabilities are liquidated. In order to accomplish this, normal costs are calculated to fully fund the current year projected liability for active duty members and reservists. In addition, amortization payments are calculated to fund liabilities that were present at plan inception (unfunded liability) and any emerging actuarial gains or losses. The 50-year amortization period for the initial unfunded liability is scheduled to end in FY 2052 (Department of Defense, 2010).

Contributions in excess of the projected current year health care benefits are invested. The investment incomes come from a variety of U.S. Treasury-based instruments such as bills, notes, bonds and overnight investment certificates. U.S. Treasury bills are short-term securities with maturities of less than one year issued at a discount. U.S. Treasury notes are intermediate securities with maturities of greater than ten years. Overnight certificates are interest-based market securities purchased from the U.S. Treasury that mature the next business day and accrue interest based on the Federal Reserve Bank of New York of repurchase agreement rates.

MERHCF also invests in U.S. Treasury Inflation Protected Securities (TIPS), which are indexed for inflation. TIPS are fixed-rate instruments designed to protect against inflation, and the principal amount is indexed to the consumer price index (CPI) by adjusting the CPI at issuance to the current CPI; as inflation increases, so does the principal amount and the coupon. All of these instruments are debt obligations of the U.S. government and are backed by the “full faith and credit” of the federal government. Debt obligations of the U.S. government have virtually no risk of nonpayment of principal and interest at the specified due date (Department of Defense, 2011).

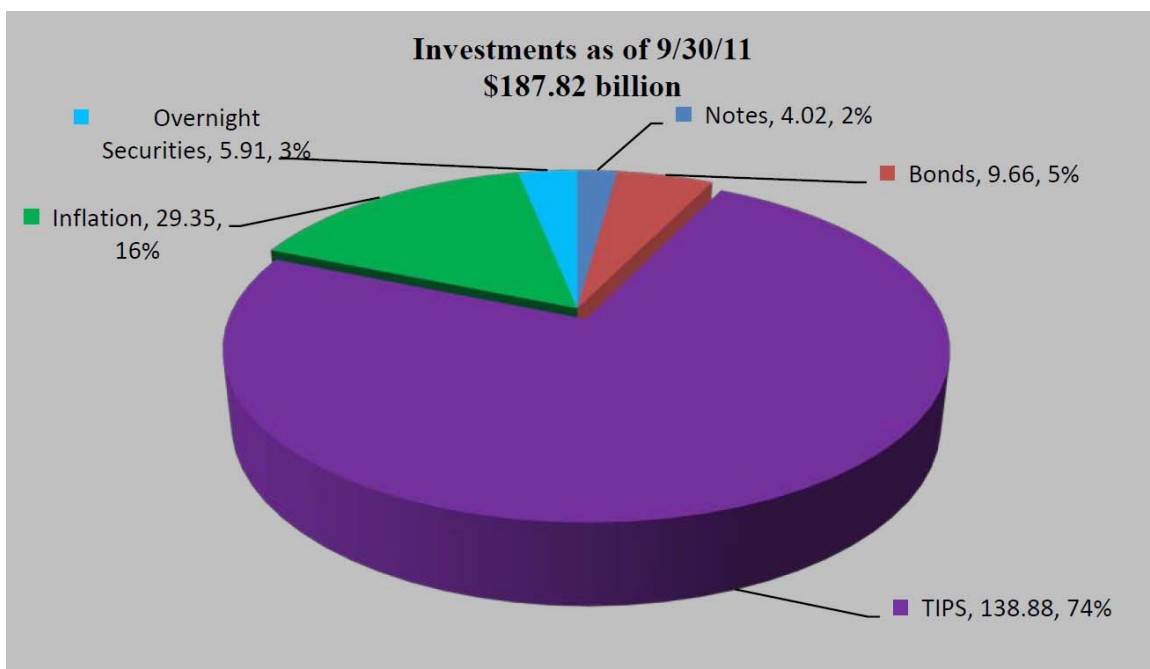


Figure 1. MERHCF Book Value of Investment Holdings as of September 30, 2011. (From DoD, 2011)

3. MERHCF Health Care Expenditure Payments

Military health benefits are organized and delivered through systems in two distinct settings. The Direct Care System delivers healthcare by TRICARE in military owned and operated treatment facilities, i.e., MTFs. The other system is the Purchased Care System where healthcare is delivered by civilian providers outside MTFs under contract to TRICARE, also known as network provider (Tanielian, Harris, Suarez, Labor, Bradley, Atkinson, & Glassman, 2003).

MERHCF payment for Purchased Care is cost-based using standard claims, while MERHCF payment for Direct Care is workload-based using the prospective payment system to estimate the cost of care. The prospective payment amounts are calculated at the MTF level and include both Military Personnel (MILPERS) and Defense Health Program (DHP) Operations and Maintenance (O&M) costs. The prospective payment amounts are based on costs reported by the MTF's Medical Expense and Performance reporting System (MEPRS) and patient encounter data for the most recent fiscal year for which data is complete at the time the calculations are prepared (Breier, 1999).

Figure 1 shows MERHCF expenditures from FY2007 to FY2009 by type of service. Total MERHCF expenditures increased from \$6,770 million to \$7,818 million. MERHCF MTF care expenses were \$1,691 million, which is 22 percent of the total MERHCF expenditures in FY 2009 (Military Health Systems, 2010).

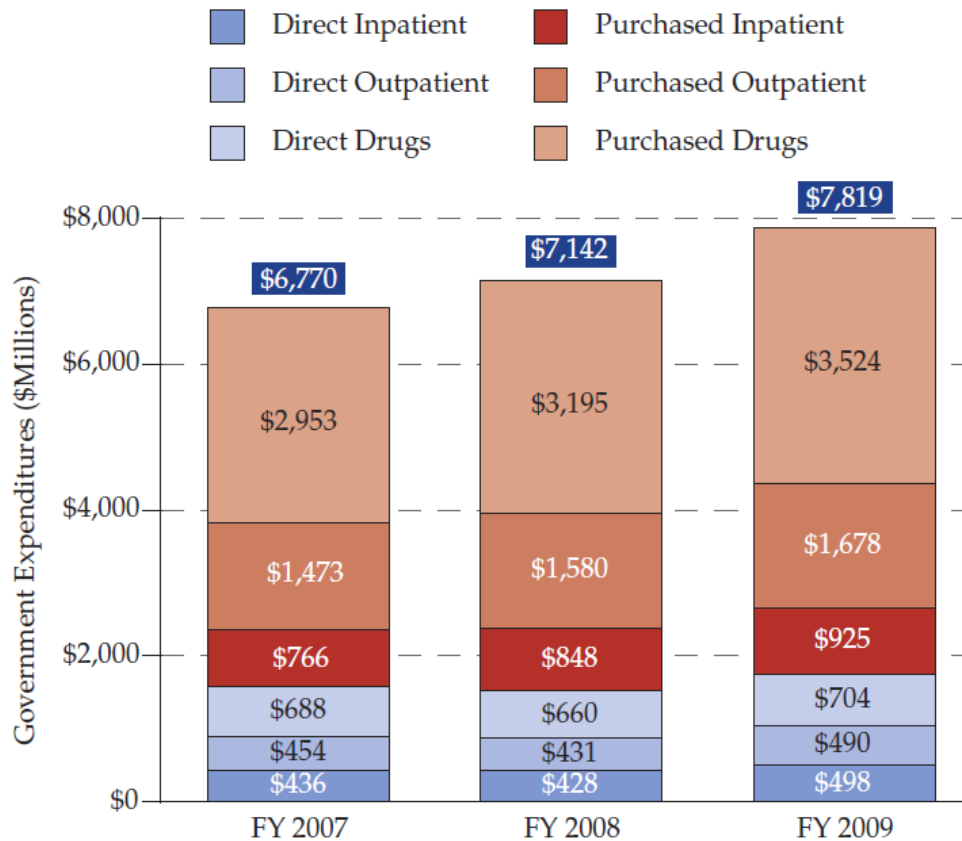


Figure 2. MERHCF Expenditures from FY2007 to FY2009 by Type of Service. (From DoD, 2010)

4. Calculation of Payments for Health Care Provided in MTFs

In coordination with the Military Departments and OUSD Comptroller, TMA developed MTF-specific rates for prospective payment calculations. These MTF-specific rates are the average dollar cost per workload unit (Relative Weighted Product, Ambulatory Patient Group or prescription, as described in the following subparagraphs) for each MTF. These costs are based on the most recent year for which data is available and inflated to the execution year using standard Office of Management and Budget (OMB) inflation rates applicable to those years. There are three categories of such rates:

a. Inpatient Care

Inpatient care cost is calculated using Relative Weighted Product (RWP). An RWP is a DoD measure of workload that represents the relative resource consumption of a patient's hospitalization as compared to other inpatients. RWPs are generated as the result of completed Composite Health Care System (CHCS) Standard Inpatient Data Records (SIDRs). The prospective amount for inpatient care for eligible beneficiaries for each MTF is the product of the estimated RWPs for that MTF multiplied by the MTF-specific rate per RWP for the year of execution.

b. Outpatient Care

Outpatient care cost is calculated using Ambulatory Patient Group (APG) weight. An APG is a case-mix classification tool used to measure resource consumption for outpatient visits. APG weights are generated as the result of completed CHCS Standard Ambulatory Data Records (SADRs). The prospective payment amount for outpatient care for each MTF is the product of estimated APG weights for that MTF multiplied by the MTF-specific rate per APG weight for the year of execution.

c. MTF Outpatient Pharmacy

MTF Outpatient Pharmacy prospective payments are calculated for two separate cost compositions: (1) Ingredient costs are prices for pharmacy ingredients purchased from vendors. The prospective payment amount for Fiscal Year 2010 is calculated using Fiscal Year 2008 MTF-specific total ingredient cost from the Medical Expense and Performance Reporting System (MEPRS) inflated to Fiscal Year 2010. Prospective payment amounts for subsequent years are based on the most recent completed year data from the Pharmacy Data Transaction Service (PDTs); (2) Non-ingredient costs are all other costs associated with MTF Outpatient Pharmacy operations (military and civilian labor, supplies, etc.). These rates are based on MEPRS cost per prescription for the most recent fiscal year for which data is complete at the time calculations are prepared, inflated to the year of execution. Prospective payment amounts

are the product of the MTF-specific non-ingredient rates multiplied by the estimated number of prescriptions that were filled for that year (Department of Defense Directive 6070.2, 2002).

5. MERHCF Reimbursements to MTFs

The OUSD Comptroller distributes MTF prospective payments to the Services for MILPERS costs and to TMA for DHP O&M costs based on the calculated annual total program amount. TMA, in turn distributes DHP funds to the Services for execution. The OUSD Comptroller includes financial authority in the DHP Expense Operating Budget to finance the annual financial plan requirement of the prospective payment.

When the year of execution is completed and the associated workload and cost data are available, TMA conducts a “Level-of-Effort” (LOE) execution review in coordination with the OUSD Comptroller and the Services. The LOE process compares the prospective payment amounts to actual workload and cost using data from the MHS Data Repository (MDR) for RWP, APG weights and pharmacy ingredient or non-ingredient costs. The accuracy of the LOE calculations depends on the different data systems (e.g., CHCS, MEPRS & PDTS) providing accurate, timely, and complete cost and workload data (Department of Defense Directive 6070.01, 2003).

B. MTF BUSINESS OPERATIONS

1. Access to Care (ATC)

Under TRICARE, beneficiaries obtain care either from military hospitals and clinics, referred to as MTFs, or from civilian providers. DoD’s TMA, which oversees the program, uses managed care support contractors to develop networks of civilian providers and to perform other customer service functions, such as processing claims and assisting beneficiaries with finding providers. The contractors are required to establish adequate networks of civilian providers-referred to as network providers-to serve all TRICARE beneficiaries in geographic areas called Prime Service Areas. The contractors

use estimates of the number of TRICARE users, among other factors, to develop provider networks and ensure adequate access to care for beneficiaries.

a. Priorities for Care

Active duty personnel, military retirees, and their dependents are not afforded equal access to care in military medical facilities. Since the establishment of TRICARE and pursuant to the Defense Authorization Act of FY 1996, DoD has established the following basic priorities for care in Military Treatment Facilities: Priority 1: Active-duty service members; Priority 2: Active-duty family members and survivors who are enrolled in TRICARE Prime; Priority 3: Retirees, their family members and survivors who are enrolled in TRICARE Prime; Priority 4: Active-duty family members who are enrolled in TRICARE Prime; Priority 5: All other eligible persons.

b. Enrollment Policy

In FY 1998, the Military Healthcare Service System (MHSS) developed the MTF Enrollment-Based Capitation methodology. The capitation method used to allocate resources to the MTFs provided the incentives to encourage every commander, provider, and decision maker to be fully accountable for delivering high-quality, cost-effective health care services to beneficiaries. Enrollment-Based Capitation incorporated the following guiding principles: (1) Empowered MTF commanders with full accountability for all resources needed to support their enrolled beneficiary population and provide incentives to produce or procure high-quality, cost-effective, and clinically appropriate health care services at every organizational level throughout the MHSS; (2) Provided MTF budgets for the three Military Departments based primarily on enrolled beneficiaries adjusted by appropriate demographic variables (e.g., age/sex) with special considerations for medical readiness and training, Graduate Medical Education (GME), and space-available care for Medicare eligible and non-enrolled beneficiaries; (3) Subjected DHP funding to periodic review and adjustments for health care provided by and for other MTFs and or the Managed Care Support contractor; and (4) Provided Military Departments their annual Defense Health Plan (DHP) appropriation allocation to

finance medical activities in support of their specific mission requirements and consistent with Enrollment-Based Capitation (TRICARE Management Activity, 2008).

Figure 2 shows the average number of MHS beneficiary eligibles, enrollees, and users from FY2007 to FY 2009. The number of retirees and family members age 65 and older continues to increase at the fastest rate of any beneficiary group (4.4 percent) (Military Health Systems, 2010).

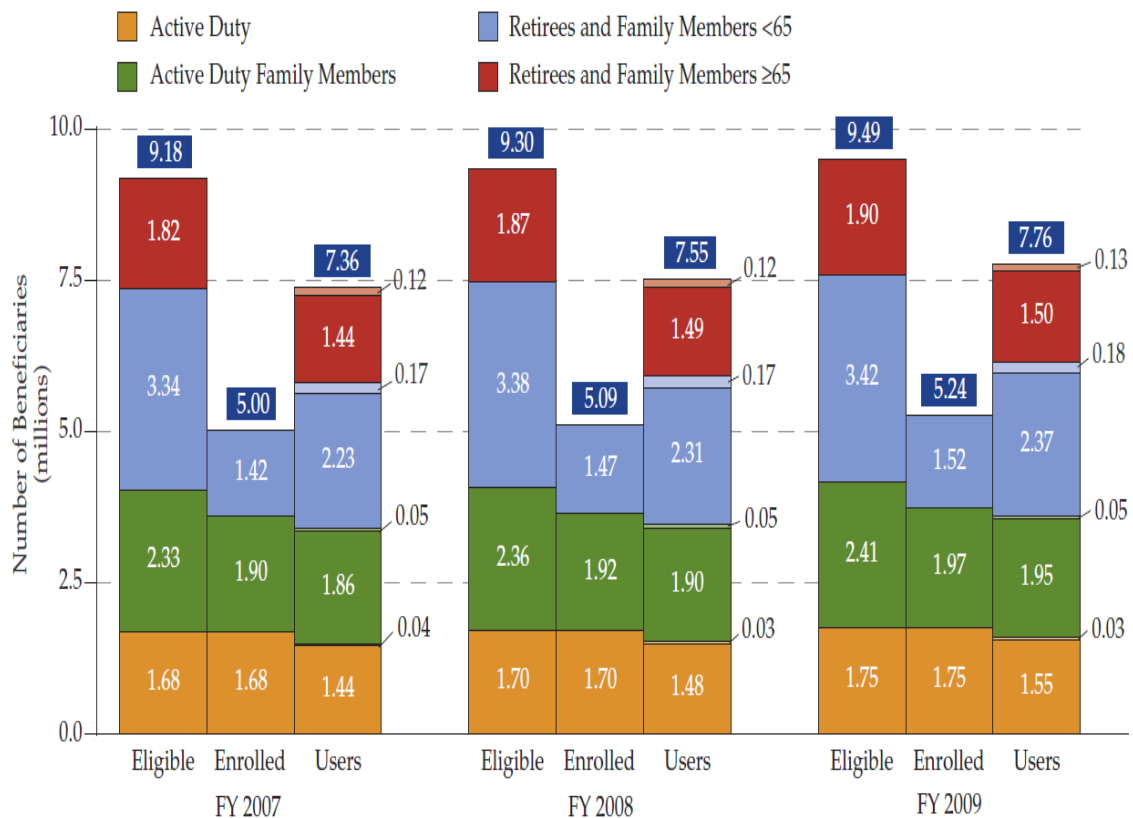
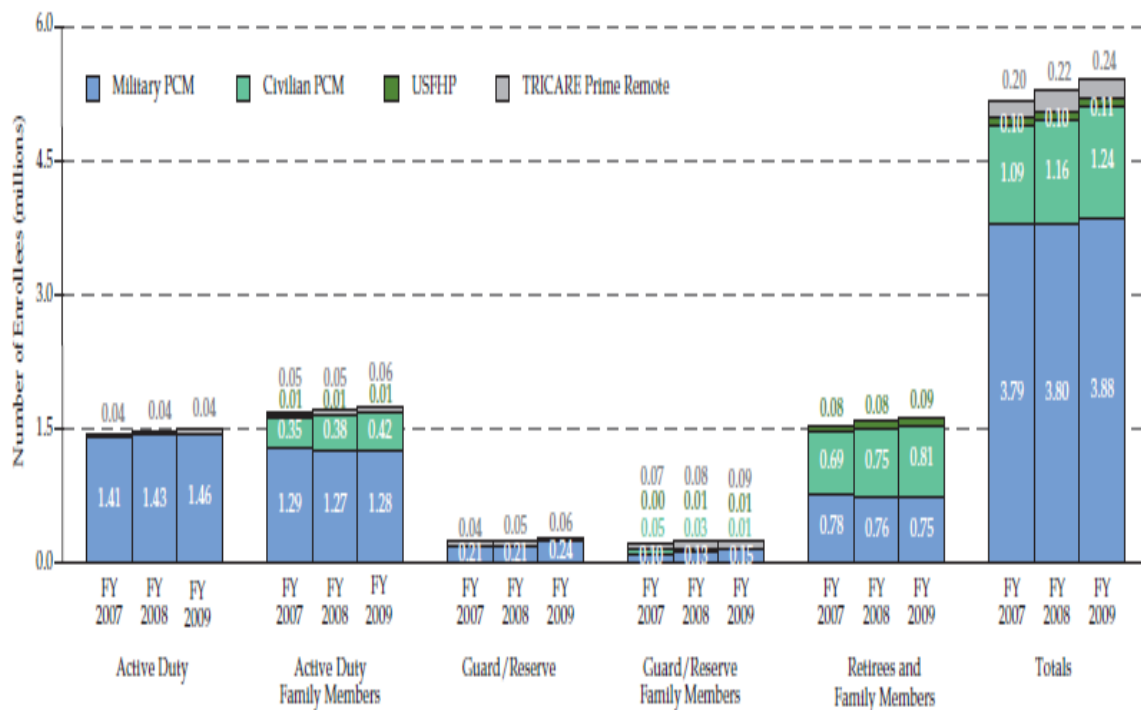


Figure 3. Average Number of FY2007 to FY2009 Eligibles, Enrollees, and Users by Beneficiary Category. (From DoD, 2010)

Figure 3 shows that from FY 2007 to FY 2009, MTF capacity has remained tight as a result of the mobilization of Guard/Reserve members, and the fact that more enrollees (especially retirees) were assigned to civilian Primary Care Managers (PCM) (Military Health Systems, 2010).



Source: DEERS 12/4/2009

Figure 4. Trends in the End-of-Year Number of Enrolled Beneficiaries by Beneficiary Group. (From DoD, 2010).

2. Business Plans

MHS adopted the Business Plan concept in 2003, and DoD MTFs have subsequently used the Tri-Service Business Planning Tool (TSBPT) in submitting their Business Plans. The TSBPT application was created in a joint effort to generate an enterprise solution for business planning among the military's healthcare services and systems. The TSBPT is the main source of DHP funds allocation via the Prospective Payment System (PPS). PPS helps the MHS be more responsive and balanced in allocating personnel and assets, and ensuring that those resources more accurately reflect the healthcare needs of TRICARE beneficiaries. The Tri-Service Business Plans serve as a vital function in providing a common framework across the MHS for improving and measuring performance in the Direct Health Care System. As MTFs participate in

uniform processes set forth through PPS, the MHS is able to see more accurate and consistent workload projections to evaluate MTF performance. The projections enable the MHS to readily identify shortfalls in a facility, and prescribe Capacity-to-Demand solutions for improving the delivery of healthcare services to all beneficiaries (Bureau of Medicine and Surgery, 2009).

a. Prospective Payment System (PPS)

The Omnibus Budget Reconciliation Act of FY 1985, Public Law 99–272, required the Health Care Financing Administration (HCFA) to develop a PPS for ambulatory surgery, similar to the system for Medicare inpatient reimbursement, to replace retrospective payment (cost-based payments) to a diagnostic-based PPS. The PPS pays a fixed, predetermined amount for unit of service, adjusted for patient characteristics that affect the cost of providing care (Sanders, 2005).

In 2003, MHS began development of a new budget allocation model for the DHP funds. This new model resulted in the implementation of the PPS and TSBPT, and began to influence the Services' funding based on workload measures. Under PPS, health care cost is based upon productivity that can be measured using Relative Value Unit (RVU) for outpatient care and RWP for inpatient care. The RVU and RWP systems assign numerical values to health care services—office visits, hospital care, and procedures to quantify the relative work and cost of these services. The reimbursement for outpatient and inpatient services based on RVU and RWP is to compensate for physicians' work, practice cost, and malpractice insurance.

b. Performance-Based Budget

In 2006, the Services expanded PPS to use performance-based planning, financing and management for all DHP funding. This approach is based on the Pay-for-Performance program that provides incentive for increasing productivity or improving healthcare quality. The Air Force has the Air Force Medical Services (AFMS) Business Plan model to provide financial incentives to MTFs that increased overall productivity. The Army has the Performance-Based Adjustment Model (PBAM), which gives a bonus

to MTFs that utilize evidence-based medical practices and improve clinical outcomes. The Navy has the Performance-Based Budgeting (PBB) system that provides incentives for both quality and workload. These programs have many similar goals, but use different methods for achieving objectives. The use of financial incentives and/or disincentives is common in all the service's pay-for-performance models (Landon, 2009).

C. MERHCF'S IMPACT

The establishment of MERHCF has provided a stable source of funding for the benefit and better health care for DoD Medicare-eligible beneficiaries. The accrual funding of MERHCF has no significant effect on balancing the budget. The change is revenue-neutral for the cost of health care, since the funds are invested in U.S. Treasury securities, and the securities are disinvested to pay for the care delivered. Tax or other government revenues are used to pay for disinvested securities. The only added cost from a taxpayer's standpoint is the cost associated with administering the fund. The administration of MERHCF includes a system of internal controls and external review and audit to ensure that the fund is used for the purpose intended by Congress. The fund must be managed to ensure compliance with applicable laws and regulations, as well as reasonable assurance and safeguards against waste, loss, unauthorized use, and misappropriation (Congressional Budget Office, 2007).

MERHCF is a fund separate from DHP monies that was established to pay for medical services provided by MTFs to Medicare-eligible military beneficiaries. Since MERHCF is a reimbursement for the cost of health care provided to Medicare-eligible beneficiaries, it provides the opportunities and challenges for MTFs to increase their annual budget and funding by effectively and efficiently managing their delivered health care at the facility level—particularly to keep, if not expand, the Medicare-eligible patient load, and increase their access to the MTF.

Figure 4 shows that the Unified Medical Program (UMP) increased 9.5 percent from almost \$43 billion in FY 2007 to almost \$47 billion in FY 2009, and is currently programmed for almost \$49 billion (estimated) in FY 2010 (as reflected in the FY 2010 President's Budget Estimates). Over half of the \$6 billion growth in total expenditures

from FY 2007 to the projected FY 2010 budget is in the private sector, purchased care component of the UMP (Military Health Systems, 2010).

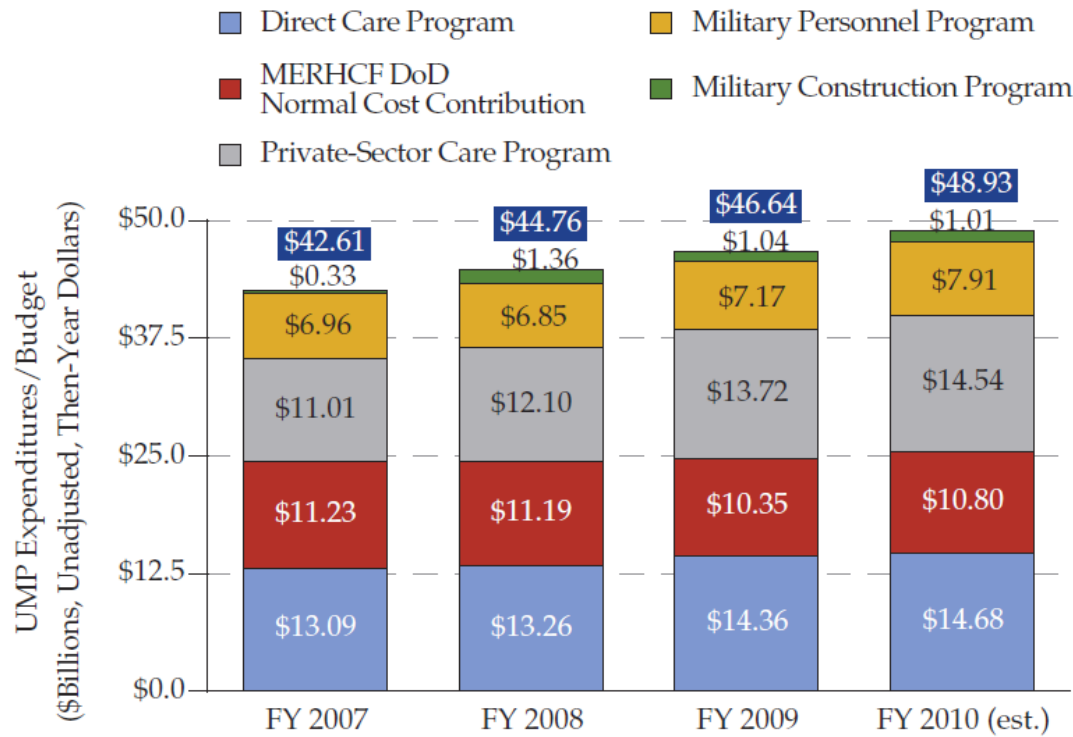


Figure 5. FY 2007 to FY 2009 (Estimate) Unified Medical Program (\$ Billions) (Unadjusted, Then-Year Dollars). (From DoD, 2010).

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III. METHODOLOGY

The research methodology used in this project is a comparative approach in providing data and business operation analysis of two Navy MTFs. The selected MTFs are categorized as small-size medical facilities and geographically located in remote areas of California (Lemoore and Twentynine Palms California). Both MTFs have inpatient, outpatient, and limited specialty support capabilities but with different enrollment policy on military retirees and their family members. The study will use common elements of Health Care Requirements Analysis (HCRA), market-based business planning and best business practices to show its relationship with the health care cost provided to Medicare-eligible military retirees and their families. The TMA and BUMED's Business Planning Guidance was also used to incorporate the general and required operations of MTFs. Prior to the research a thorough literature review was conducted in examining the laws and instructions that govern MERHCF, and the calculation of MERHCF reimbursements to MTFs.

The primary data source for this study is the MHS Management Analysis and Reporting Tool, referred to as the MHS MART (M2). M2 is an integrated information data warehouse that contains summarized and detailed clinical, population, and financial data from all MTFs in the MHS. The tool permits authorized users access to patient-level data for direct and network purchased care in both outpatient and inpatient settings. The system is intended to enhance decision making for health care executives by providing the capability to perform trend analyses, utilization studies, patient and provider profiling, and business case analyses.

Several information systems feed into the MDR, the primary data source for M2. The MDR receives information from MTFs, DoD agencies, and other business partners via the following reporting mechanisms: (1) CHCS and Armed Forces Health Longitudinal Technology Application (AHLTA): primary automated medical information systems, both clinical (SIDR and SADR) and administrative for the DoD. (2) MEPRS: repository of summarized data of resources expended to deliver health care and maintain

readiness such as military expense reporting. (3) Defense Enrollment and Eligibility Reporting System (DEERS): centralized database for personnel information and medical benefits eligibility within the DoD. (4) PDTs: repository of utilization prescription record for MHS-eligible beneficiary.

A. DEMAND

The demand for health care services is traditionally estimated by calculating historical utilization rates and applying them to projected population levels. These historical rates are modified to account for the effects of changes in clinical capabilities and business practices (Yancoskie, 2003). In this study, the MTF enrollment, workload, and service utilization data are analyzed to assess potential trends.

1. Population and Enrollment

The military's eligible population consists of all DoD beneficiaries identified by the Title 10 of the USC. However, not all eligible beneficiaries in the PRIME service areas are enrolled at the MTFs. A Prime service area is a geographic area where TRICARE Prime benefits are offered that includes all catchment areas, Base Realignment and Closure (BRAC) sites, a forty-mile radius around all military treatment facilities, and all additional areas, which regional contractors have to establish a TRICARE network. The enrollment business decision will be based on the MTF's ability to achieve its mission and goals within their capabilities and capacity without compromising the quality of health care services provided.

The population of interest is patients enrolled to NHL and NTHP with the beneficiary designation of Retired (RET) and Retired Family Members (RETFM). However, since this study is on MERHCF, the primary focus is on two other beneficiary categories, designated as RET over 65 and RETFM over 65. The analysis was conducted to determine the potential effect of their enrollment in the MTF on demand, cost for their medical services, and MERHCF reimbursement to the MTFs.

Table 1 shows the MHS categories of eligible beneficiaries used in this study. The beneficiary categories of interest are RET and RETFM, which include beneficiaries of RET with age over 65 and their family members.

Beneficiary Category	Description
AD	Active Duty Military Personnel
ADFM	Family Members of Active Duty Military Personnel
RET	Retired Military Personnel (includes over 65)
RETFM	Family Members of Retired Military Personnel (includes over 65)
Other	Other MHS Eligible, e.g., Reserve

Table 1. MHS Beneficiary Category.

2. Workload and Utilization

MHS uses RVU and the actual number of patient encounters for outpatient workload accounting. The RVU metric is the primary tool used to account for provider workload. An encounter is recorded with each patient visit to a provider within an MTF for medical care.

RWP and number of patient bed days are used for inpatient workload accounting. The RWP is the primary tool used to account for the provider workload, and bed days account for the number of days staffed inpatient beds are occupied (a staffed bed is an inpatient bed with proper equipment and personnel).

Utilization is calculated using the validated workload (actual workload) divided by the enrolled or user population for the respective fiscal year, e.g., FY10 Utilization Rate = FY10 Total Workload/FY10 Enrolled or User Population. The Utilization Rate is also used to project future workload or productivity, e.g., FY11 Workload = FY10 Utilization Rate X FY11 Projected Enrollment, FY12 Workload = FY10 Utilization Rate X FY12 Projected Enrollment (Department of Defense Manual 6010.13-M, 2008).

B. CAPACITY

The capacity of an MTF is its ability to provide the demand for health care services. The MTF's capacity will include the available services, facility and manpower that are provided and used in meeting the demand. In this study, MTF services, production, and staffing were used for the demand analysis.

1. Staffing and Services

Effective use of staffing represents one of the most significant opportunities to reduce the costs of operating a medical treatment facility. For the Navy, the Manual of Navy Total Force Manpower Policies and Procedures, OPNAV Instruction 1000.16J, (1998) stated manpower requirements should be based on actual or projected workload for approved operational requirements in support of the command mission. These requirements represent the minimum staffing necessary for performance of all assigned functions (Department of Defense Instruction 6000.13, 1997).

DoD uses Full Time Equivalent (FTE) to account for the amount of labor available to the MTF. One FTE is equivalent to 168 man-hours for a month or 2,080 man-hours for a year. The following FTEs are used to identify workload data: (1) Assigned FTE is the time reported by personnel assigned to specific cost or work centers on MTF manning documents; (2) Available FTE is the time reported by any personnel in a given clinic for a given month that includes those who are assigned, attached, borrowed, contracted and volunteers; (3) Non-Available FTE is the time reported by assigned personnel in their assigned work center that is unrelated to the health care mission such as sick leave and disaster preparedness (Department of Defense Manual 6010.13-M, 2008).

Table 2 shows the different staff skill types and description for the DoD MHS. The staff skill type is applied to the appropriate FCC and procedural codes that correspond to a workload value (RVU or RWP). Skill Type 1 staff members produce higher workload (RVU or RWP) than Skill Type 2 staff members.

Staffing Skill Type	Description
1—Clinician	Physician, Dentist, Medical Resident, Medical Fellow, Medical Intern, Dental Intern, Dental Fellow, Dental Resident, Veterinarian
2—Direct Care Professional	Physician Assistant, Nurse Practitioner, Nurse Midwife, Nurse Anesthetist, Community Health Nurse, Occupational Health Nurse, Clinical Nurse, Specialist, Other Direct Care Para-Professional, e.g., Independent Duty Corpsman (IDC)
3—Registered Nurse	Registered Nurse
4—Direct Care Para-Professional	License Practical/Vocational Nurse, Nursing Assistant
5—Administrative/Clerical	Logistics, Clerical, Administrator

Table 2. MEPRS MHS Personnel Category by Skill Type.

Table 3 shows the MEPRS Functional Cost Codes (FCC) for the different services provided by the MTF. The FCCs are used to specifically assign the cost to a service for the resources (labor & supplies) used in providing that service.

MEPRS FCC	Service Description
A	Inpatient Care
B	Ambulatory Care
C	Dental Care
D	Ancillary Services
E	Support Services
F	Special Programs
G	Readiness

Table 3. MEPRS Functional Codes for MTF Type of Services.

2. Staffing Change Impacts

The unique mission of DoD's MHS in providing health support for the full range of military operations during peace and war time affects the availability of active duty personnel at the MTF, which reduces the FTEs to meet the demand. AD military

personnel have the responsibilities of their rotational job assignments, collateral training, military training, and deployment. MHS guidance on FTE availability for AD personnel is 75 percent or 0.75 FTE. However, MTF management can establish their FTE availability based on the MTF's business decision, and depending on the AD member's duties and responsibilities, e.g., Physician assigned as Director for Surgical Services can be assigned 0.5 FTE. Also, MHS uses an enrollment capacity planning model that required PCM assignment to all beneficiaries enrolled in the MTF, which changes their number of empanelled patients, when a PCM is deployed. As per MHS Population Health Improvement (PHI) guidance, a goal of 1,300 to 1,500 enrollees per PCM was deemed appropriate (Coefield, 2001).

The deployment of MTF AD personnel especially health care providers decreases the MTF' capacity, which forces the MTF to either acquire contract medical personnel or redirect services to civilian health care providers within the TRICARE network, i.e., Purchased Care. This trend is shown in Figure 1 with increased Purchased care MERHCF expenditures from FY 2007 to FY 2009 for inpatient, outpatient, and prescription drugs. Inpatient expenditures increased by 21 percent, outpatient expenditures by 21 percent, and prescription drug expenditures by 19 percent (Military Health System, 2010).

C. BUSINESS PLAN

Business plans are created annually by Navy health care organizations to establish operating targets for the amount of medical services to be provided at the MTF and the resources that will be required to perform them. These documents essentially serve as a guide to MTF business practices and pursuit of command strategic goals. This study has used NHL and NHTP business plans for FY 2007, FY 2008 and FY 2009.

1. Prospective Payment

Under PPS, the MTF workload performance is measured by RVU for outpatient care and RWP for inpatient care, which is the financial reimbursement for work produced. The workload value is based on the price at which care can be purchased in the local area. For example, the FY 2009 average value per RWP (MEPRS FCC A codes) is

\$8,797; and per RVU (MEPRS FCC B codes) is \$90. The computed PPS workload value at the MTF level is rolled up to Agency level and then allocated to Services after reconciliation at Service level (TRICARE Management Activity, 2009).

In this study, the analysis is done on the PPS amount of MERHCF reimbursements received at the MTF level (NHL & NHTP).

2. Performance-Based Budget

In 2008, the Navy's Bureau of Medicine and Surgery (BUMED) implemented its PBB model for facilities in the CONUS. Under PBB, 70 percent of an MTF's budget is vulnerable to financial adjustments based on performance. The breakout for the MTF PBB budget is 45 percent based on RVUs and RWPs (PPS for workload), with another 25 percent focused on different quality indicators. These indicators fall into the following categories (with percentage of budget impact in parentheses):

- Evidence-Based Healthcare (10 percent of budget)
- Individual Medical Readiness Rates (5 percent of budget)
- Inpatient Bed Fill Rates (5 percent of budget)
- Public Health (5 percent of budget)

This model allows for adjustments due to deployments so that MTF budgets are not negatively impacted by the readiness mission (Landon, 2009).

In this study, the analysis includes the PBB adjustments received with the MERHCF PPS reimbursements.

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IV. ANALYSIS OF FINDINGS

In this section, the researcher provides analysis of the information and data obtained from NHL, NHTP, and DoD databases using the concepts presented in the methodology section.

A. DEMAND ANALYSIS

1. MTF Enrollment

NHL is located at Naval Air Station Lemoore (NASL) in Lemoore, CA, approximately 50 miles south of Fresno, CA. The hospital has two outlying facilities, an outpatient clinic located at NAS Fallon, NV about 1 hour east of Reno, NV and a Branch Dental Clinic (BDC)/Navy Medical Administrative Unit (NMAU), located at the Navy Postgraduate School in Monterey, CA. This study focuses on the total eligible beneficiaries in the PRIME service areas for Lemoore, CA.

Table 4 shows NHL enrollment for FY 2006 to FY 2010. Although NHL's AD enrollment has been increasing for the past 3 years, total enrollment has declined due to AD members' selection of unaccompanied tours, resulting in decreased enrollment of ADFMs. Also, NHL has discontinued the enrollment of eligible retired and retired family members due to increased deployment of MTF staff members especially the Primary Care Managers (PCM), who are assigned physicians for all patients enrolled at the MTF (Watling, personal communication, September 20, 2010).

	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
AD	2,123	1,986	1,940	2,306	2,534
ADFM	7,421	7,122	6,419	6,636	6,591
RET	805	760	747	746	745
RETFM	1,338	1,212	1,143	1,140	1,136
Others	421	410	430	716	575
Total	12,108	11,490	10,679	11,544	11,581

Table 4. NHL Enrollment for FY 2006 to FY 2010.
(After TRICARE Management Activity, 2010)

NHTP is also called Robert E. Bush Naval Hospital, and is located at Marine Corps Air Ground Combat Center (MCAGCC) in the Mojave Desert near Joshua Tree National Park. The hospital has two outlying facilities, Branch Health Clinics (BHC) Naval Air Weapons Station, China Lake, located at Ridgecrest, CA, and the Marine Corps Mountain Warfare Training Center, located 25 miles from Bridgeport, CA, approximately one hour from Lake Tahoe. This study focuses on the total eligible beneficiaries in the PRIME service areas for Twentynine Palms, CA.

Table 5 shows enrollment at NHTP for FY 2006 to FY 2010. The U.S. Marine Corps' force expansion has resulted in increased enrollment at this facility. Also, NHTP has opened enrollment for eligible retired and retired family members (Wheeler, personal communication, November 8, 2010).

	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
AD	1,779	2,385	2,114	2,089	2,121
ADFM	6,457	6,634	7,218	7,630	7,839
RET	683	703	731	739	747
RETFM	1,182	1,154	1,164	1,184	1,195
Others	269	215	267	167	139
Total	10,370	11,091	11,494	11,809	12,041

Table 5. NHTP Enrollment for FY 2006 to FY 2010.
(After TRICARE Management Activity, 2010)

2. MTF Workload and Utilization

Table 6 shows the actual workload produced at NHL for FY 2007 to FY 2009. The data show decreasing patient encounters, which is due to the declining MTF enrollment. Although patient encounters have decreased, the RVU production has increased, which may be due to increased accuracy of the documentation and coding of patient encounters and procedures performed. The average RVU and RWP produced in a fiscal year for RET over 65 and their family members is 4 percent of the total RVU and less than 1 percent of the total RWP, respectively. These workload data for RET over 65 and their family members indicate the following: (1) Low enrollment of Medicare-eligible beneficiaries; (2) Limited specialty care services available, especially for Medicare-eligible patients; (2) Decreased access to care standards or limited appointments available; and (3) Low priority of care standards. Access to care and priority of care standards can be properly managed, which can increase MTF capacity.

	FY 2007		FY 2008		FY 2009	
	RVU	Encounters	RVU	Encounters	RVU	Encounters
Other MTF Enrollee	101,772	108,061	105,920	101,910	106,477	95,943
Over 65 MTF Enrollee	4,503	5,023	4,917	4,768	3,876	4,219
Total	106,275	113,084	110,837	106,678	110,353	100,162
	FY 2007		FY 2008		FY 2009	
	RWP	Beddays	RWP	Beddays	RWP	Beddays
Other MTF Enrollee	432	1,968	495	2,124	379	1,637
Over 65 MTF Enrollee	3	10	2	7	5	19
Total	435	1,978	497	2,131	384	1,656

Table 6. NHL Workload for FY 2007 to FY 2009. (After Military Health System Management Analysis and Reporting Tool, 2010)

Table 7 shows NHTP workload for FY 2007 to FY 2009. The data shows decreasing encounters, which correspond to the declining MTF enrollment. However, RVU production is increasing at a higher rate than NHL's RVU per encounter produced. In FY 2009, NHTP's RVU per encounter is twice that of NHL. The high RVU per encounter value is most likely due to increased accuracy of documentation and the complexity of procedures performed during the patient encounter. NHTP's FY 2009 outpatient coding accuracy has increased by 20 percent (TMA, 2009), and the utilization of mental health services has increased for both AD service and family members. The average psychiatry RVU per encounter is around 1.8, which is 30 percent higher than the average family practice RVU per encounter (Wheeler, personal communication, September 2010). The average RVU and RWP produced in a fiscal year is also 4 percent of the total RVU and less than 1 percent of the total RWP, respectively. These workload data for RET over 65 and their family members indicate the following: (1) Low

enrollment of Medicare-eligible beneficiaries; (2) Limited specialty care services available, especially for Medicare-eligible patients; (3) Decreased access to care standards or limited appointments available; and (4) Low priority of care standards. However, NHTP has a higher utilization rate for Medicare-eligible beneficiaries than NHL in FY 2008 and FY 2009, which shows an increase in the eligible population and demand.

	FY 2007		FY 2008		FY 2009	
	RVU	Encounters	RVU	Encounters	RVU	Encounters
Other MTF Enrollee	106,878	87,029	165,492	86,335	179,453	84,932
Over 65 MTF Enrollee	5,175	3,897	6,165	5,157	7,008	4,968
Total	175,053	91,106	171,657	91,492	186,461	89,900
	FY 2007		FY 2008		FY 2009	
	RWP	Beddays	RWP	Beddays	RWP	Beddays
Other MTF Enrollee	849	3,861	861	4,303	987	4,591
Over 65 MTF Enrollee	5	15	7	21	13	36
Total	855	3,876	868	4,323	1,000	4,627

Table 7. NHTP Workload for FY 2007 to FY 2009. (After Military Health System Management Analysis and Reporting Tool, 2010)

B. CAPACITY ANALYSIS

The business plans of NHL and NHTP for FY 2007 through FY 2009 indicate that neither MTF was able to attain its workload benchmark. Both MTFs have been between 7 to 10 percent below their target.

1. MTF Services

NHL is a 150,000 square-foot, 16-bed facility with a 10-bed Medical Surgical Unit (MSU), and a 6-bed Maternal Infant Unit (MIU) with 6 Bassinet beds for newborns. The hospital offers both inpatient and outpatient care, comprised of the following clinical services: (1) Primary Care, including an Urgent Care Clinic, Family Practice, Pediatrics, Internal Medicine, Flight Medicine, a Deployment Health Clinic, and a Wellness Center; (2) Specialty Care that includes Obstetrics/Gynecology, General Surgery, Orthopedics, Podiatry, Mental Health, Substance Abuse Rehabilitation Program (SARP), Physical Therapy, Optometry, Audiology, Tele-Dermatology and Eyes, Nose & Throat (ENT); (3) Dental Care, i.e., General Dentistry, Oral Surgery, Periodontics, and Prosthodontics; and (4) Ancillary Support, consisting of Radiology, Laboratory, and Pharmacy (Naval Hospital Lemoore Instruction 5450.1S, 2009).

NHTP is a 160,000 square foot, 22-bed facility with a 15-bed Multi-Service Ward, and a 7-bed Desert Beginnings Labor Delivery Recovery and Post Partum (LDRP) Unit. The hospital offers both inpatient and outpatient care. This care is comprised of the following services: (1) Primary Care–Emergency Medicine, Pediatrics, Internal Medicine, Adult Medical Care, Aviation Medicine, a Deployment Health Clinic, and a Wellness Center; (2) Specialty Care that includes Obstetrics/Gynecology, General Surgery, Orthopedics, Mental Health, a Substance Abuse Rehabilitation Program (SARP), Physical Therapy, Chiropractic, Optometry, Audiology, Public Health and Eyes, Nose & Throat (ENT); (3) Dental Care, including General Dentistry, Oral Surgery, Periodontics, and Prosthodontics; and (4) Ancillary Support that includes Radiology, Laboratory, and Pharmacy (Naval Hospital Twentynine Palms Instruction 5450.IH, 2009).

2. MTF Staffing

Table 8 shows the staffing FTEs of NHL for FY 2007 to FY 2009. NHL has the following assigned personnel: 84 officers, 236 enlisted, and 84 civilian employees. This study focuses on the available FTEs for Skill Type 1 and 2, with emphasis on Skill Type 1 because the clinicians drive the RVU production for the MTF. The data shows that Skill

Type 1 FTEs are declining due to deployments and extended gapped billets or no replacement. Although Skill Types 3 and 4 do not produce any RVU, they contribute to the overall RVU production by providing the needed support to clinicians in maximizing their RVU production.

	FY 2007		FY 2008		FY 2009	
	Assigned FTE	Available FTE	Assigned FTE	Available FTE	Assigned FTE	Available FTE
Skill Type 1	25.92	35.87	24.03	27.27	23.73	23.98
Skill Type 2	12.17	19.72	20.75	22.73	22.44	19.78
Skill Type 3	24.25	41.02	30.00	43.25	52.27	47.30
Skill Type 4	183.08	246.66	195.47	274.72	232.82	240.99
Skill Type 5	107.83	139.40	107.62	138.01	127.37	134.88
Total	353.25	482.67	377.87	505.98	458.63	466.93

Table 8. NHL Staffing FTEs for FY 2007 to FY 2009. (After Military Health System Management Analysis and Reporting Tool, 2010)

Table 9 shows the staffing FTEs of NHTP for FY 2007 to FY 2009. NHTP has the following assigned personnel: 115 officers, 238 enlisted, and 142 civilian employees. NHTP's Skill Type 1 available FTEs also have declined from FY 2007 to FY 2008 due to deployments and extended gapped billets or no replacement. However, there was a small increase of Skill Type 1 available FTEs from FY 2008 to FY 2009 due to personnel support received from other Navy MTFs. Two family practice clinicians augmented NHTP's staffing during the steep transition of active duty personnel in the summer.

Also, NHTP's available FTEs for Skill Types 3 and 4, i.e., RNs, LPNs, LVNs, have increased by 40 percent and 20 percent, respectively, from FY 2007 to FY 2009 because management has decided to increase the number of civilian personnel in response to the growing U.S. Marine Corps forces in MCAGCC.

	FY 2007		FY 2008		FY 2009	
	Assigned FTE	Available FTE	Assigned FTE	Available FTE	Assigned FTE	Available FTE
Skill Type 1	31.76	38.6	29.44	30.44	29.08	31.17
Skill Type 2	14.91	21.22	25.42	25.37	27.49	25.71
Skill Type 3	29.71	44.14	36.76	48.28	64.04	61.48
Skill Type 4	224.32	265.42	239.50	306.68	285.26	313.23
Skill Type 5	132.12	150.00	131.86	154.06	156.06	175.31
Total	432.82	519.38	462.98	564.84	561.94	606.89

Table 9. NHTP Staffing FTEs for FY 2007 to FY 2009. (After Military Health System Management Analysis and Reporting Tool, 2010)

C. BUSINESS PLAN ANALYSIS

1. MTF MERHCF PPS

Table 10 shows the dollar value of the PPS portion of NHL's workload for FY 2007, FY 2008, and FY 2009. These PPS values of RVU and RWP workload for RET over 65 and their family members average about 4 percent of the total RVU PPS amount and 1 percent of the total RWP PPS amount, respectively. These PPS amounts are directly related to the RVU and RWP production, which is used as a measure of performance. These dollar values will be used as the baseline for NHL's annual budget (45 percent) and MERHCF reimbursement. Another 25 percent of the annual budget can be achieved by meeting MHS standards on several quality indicators in providing services to all enrolled beneficiaries including Medicare-eligible patients (see Chapter 3.C.2.).

	FY 2007 (\$)		FY 2008 (\$)		FY 2009 (\$)	
	RWP	RVU	RWP	RVU	RWP	RVU
Other	2,978,388	8,007,394	4,116,285	7,412,459	3,338,238	7,536,346
Over 65	22,980	382,295	19,669	360,105	45,444	288,587
MTF Total	3,001,368	8,389,689	4,135,954	7,772,564	3,383,682	7,824,933

Table 10. NHL PPS for FY 2007 to FY 2009. (After Military Health System Management Analysis and Reporting Tool, 2010)

Table 11 shows the dollar values for the PPS portion of NHTP's workload for FY 2007, FY 2008, and FY 2009. The funds for the PPS portion of RVU and RWP workload for RET over 65 and their family members average about 4 percent of the total RVU PPS amount and 1 percent of the total RWP PPS amount, respectively. These PPS amounts are directly related to the RVU and RWP production, which is used as a measure of performance. These dollar values will be used as the baseline for NHTP's annual budget (45 percent) and MERHCF reimbursement. Another 25 percent of the annual budget can be achieved by meeting MHS standards on several quality indicators in providing services to all enrolled beneficiaries including Medicare-eligible patients (see Chapter 3.C.2.).

	FY 2007 (\$)		FY 2008 (\$)		FY 2009 (\$)	
	RWP	RVU	RWP	RVU	RWP	RVU
Other	2,979,203	7,448,007	4,017,667	8,035,333	4,785,277	7,975,462
Over 65	24,075	300,936	32,571	361,903	38,740	387,396
MTF Total	3,003,278	7,748,943	4,050,238	8,397,236	4,824,017	8,362,858

Table 11. NHTP PPS for FY 2007 to FY 2009. (After Military Health System Management Analysis and Reporting Tool, 2010)

Table 12 shows NHL and NHTP FY 2010 and FY 2011 total Annual Planning Figures (APFs), and the MERHCF reimbursement received at these facilities that is included in the APF. NHL's MERHCF reimbursement has increased from 8 percent to 11 percent of their APF budget. NHTP's MERHCF reimbursement remained at 6 percent of their APF budget. The FY 2010 MERHCF reimbursement is based on FY 2008 LOE, which is based on FY 2008 PPS amount. The FY 2011 MERHCF reimbursement is based on FY 2009 LOE, which is based on FY 2009 PPS amount. The dollar amount of MERHCF PPS and reimbursement is different because Pharmacy costs (43 percent, see Figure 1.) were included in the PPS amount. Also, the PPS amount at the MTF level is rolled up to the Service level, which validates the amount with TMA, following which the Services redistribute the MERHCF to the MTFs.

	FY 2010 (\$)		FY2011 (\$)	
	MERHCF	APF	MERHCF	APF
NHL	2,472,008	29,594,400	3,633,000	33,017,500
NHTP	2,135,324	32,283,800	2,032,000	33,607,500

Table 12. NHL and NHTP FY 2010 and FY 2011 APF Budget.
(After Military Health System Management Analysis and
Reporting Tool, 2010)

V. CONCLUSION AND RECOMMENDATIONS

A. CONCLUSION

The establishment of MERHCF to cover medical expenditures for Medicare-eligible retirees, their family members, and survivors poses a challenge to enrollment policy at Navy MTFs. This comes at a time when MHS is in the process of shifting its philosophy towards performance-based budgeting and toward the recapture of outsourced consumers. MERHCF will provide an opportunity for Navy MTFs in maximizing the reimbursement and recapturing outsourced patrons by optimizing the effectiveness and cost efficiency of staffing and resources to deliver healthcare for the maximum number of beneficiaries.

The intent of this study was to provide an analysis that can be used by Navy MTFs in formulating their enrollment policy and business plans. The focus of the study is with the enrollment policy for Medicare-eligible retirees and their families, and its impact to the Navy MTFs.

The descriptive and comparative analysis of this study revealed several issues. First, the two Navy MTFs used in the study have the same workload utilization (4 percent) for currently enrolled Medicare-eligible beneficiaries. If NHL would open enrollment to Medicare-eligible beneficiaries, it would most likely increase the workload and exceed the 7–10 percent unused capacity.

Second, NHL and NHTP have limited specialty or higher level care services. The utilization for these services is the same (4 percent) for currently enrolled Medicare-eligible beneficiaries. Additional enrollment of Medicare-eligible beneficiaries at both MTFs would result in a high utilization of Purchased care and limited utilization of Direct care through the MTF.

Third, the portion of PPS at both MTFs provided to Medicare-eligible beneficiaries accounts for 4 to 5 percent of the total MTF workload PPS amount. However, NHL produces a lower RVU per encounter value, but NHTP produces higher

RVU per encounter value. The RVU production is not completely based on the quantity of services provided to the patients. The RVU value depends on the complexity of the service and the accuracy of the documentation of the procedures and resources used during the patient's visit.

Fourth, MERHCF reimbursements received by NHL and NHTP are based on validation and calculations made by the Services and TMA. Using the PPS amount and the average Pharmacy cost percentage, the calculated MERHCF amounts are different from the actual reimbursements, which make it difficult for MTFs to estimate future MERHCF reimbursements.

Currently, NHL and NHTP have unused capacity. NHL has discontinued the enrollment of Medicare-eligible beneficiaries while NHTP has opened the enrollment of Medicare-eligible beneficiaries. Although, both MTFs have maintained a 90–93 percent capacity utilization, NHL's remaining capacity will not be enough to meet the future demand of increasing Medicare-eligible population, due to increased number of military retirees within the Lemoore PRISM area. By contrast, the remaining capacity at NHTP would be able to support the enrollment of Medicare-eligible beneficiaries. However, it would have to re-evaluate its capacity if future demand increased due to the growth of military force (U.S. Marine Corps) and supporting elements in MCAGCC.

B. RECOMMENDATIONS

Based on the previously stated findings, literature research, and personal experience in military health care administration, the author would recommend the following: (1) Conduct a demand analysis for Medicare-eligible beneficiaries for all eligible beneficiaries (enrolled and not enrolled to the MTF); (2) Ensure MTF capacity is regularly evaluated due to staffing changes; (3) Regularly evaluate PCM empanelment and ensure they are appropriately empanelled; (4) Use any remaining capacity to first enroll any remaining eligible beneficiaries under 65 that are not currently enrolled; (5) Regularly review empanelled TFL patients and disenroll those with complex medical issues not suitable for MTF care; (6) Regularly monitor the accurate documentation and coding of workload, especially with the workload provided to Medicare-eligible

beneficiaries in order to maximize MERHCF reimbursement; (7) Emphasize staff training and turnover transition management; and (8) Ensure best business practices and guidelines are encouraged in promoting and implementing process improvements.

Although the future use of this study is not as important as the future of MERHCF policy, any further enhancement to this study would be beneficial to the management of military retirees' healthcare at the MTF level. Relevant information that could be included in improving the study is the MERHCF validation and calculation processes from TMA and the Services level. The information would be beneficial in estimating MERHCF reimbursements and determine if providing service for Medicare-eligible beneficiaries in the MTF is cost effective.

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LIST OF REFERENCES

- Breier, D. N. (1999, December). *Medicare subvention: A case analysis of reimbursement issues affecting TRICARE Senior Prime at Naval Medical Center, San Diego* (Master's thesis). Naval Postgraduate School.
- Bureau of Medicine and Surgery. (2009, January 23). Navy medicine fiscal year 2010–2012 business planning guidance. Retrieved September 14, 2010, from http://www.nehc.med.navy.mil/downloads/prevmed/Clinical_Quality/FINAL_FY_10_12_NAVMEDSUPGUIDCOVERLTR.pdf.
- Coefield, O. M. (2001, April). *Optimization and management of Naval Hospital Bremerton's military-Medicare population by market analysis of the Naval Hospital Bremerton empanelled population* (Research project). U.S. Army-Baylor HCA program.
- Congressional Budget Office. (2007, December). The health care system for veterans: An interim report. Retrieved September 14, 2010, from http://www.cbo.gov/ftpdocs/88xx/doc8892/12-21-VA_Healthcare.pdf.
- Department of Defense. (2009, November). Medicare-eligible retiree health care fund fiscal year 2009 audited financial statements. Retrieved September 14, 2010, from http://comptroller.defense.gov/cfs/fy2009/12_Medicare_Eligible_Retiree_Health_Care_Fund/Fiscal_Year_2009_Medicare_Eligible_Retiree_Health_Care_Fund_Financial_Statements_and_Notes.pdf.
- Department of Defense. (2010, January). Valuation of the Medicare-eligible retiree health care fund, September 30, 2008. Retrieved September 14, 2010, from <http://actuary.defense.gov/FY2008MERHCF3812.pdf>.
- Department of Defense. (2011, November). Valuation of the Medicare-eligible retiree health care fund, September 30, 2010. Retrieved December 28, 2011, from http://comptroller.defense.gov/cfs/fy2011/12_Medicare_Eligible_Retiree_Health_Care_Fund/Fiscal_Year_2011_Medicare_Eligible_Retiree_Health_Care_Fund_Financial_Statements_and_Notes.pdf.
- Department of Defense Directive 6070.01. (2003, November). Department of Defense Medicare-eligible retiree health care fund. Retrieved September 14, 2010, from <http://www.dtic.mil/whs/directives/corres/pdf/607001p.pdf>.
- Department of Defense Directive 6070.2. (2002, July). Department of Defense Medicare-eligible retiree health care fund operations. Retrieved September 14, 2010, from <http://www.dtic.mil/whs/directives/corres/pdf/607002p.pdf>.

- Department of Defense Instruction 6000.13. (1997, June), Medical manpower and personnel. Retrieved September 14, 2010, from <http://www.dtic.mil/whs/directives/corres/pdf/600013p.pdf>.
- Department of Defense Instruction 6015.17. (1983, March), Planning and acquisition of military health facilities personnel. Retrieved September 14, 2010, from <http://www.dtic.mil/whs/directives/corres/pdf/601517p.pdf>
- Department of Defense Manual 6010.13-M. (2008, April). Medical expense and performance reporting system for fixed military medical and dental treatment facilities manual. Retrieved September 14, 2010, from <http://www.dtic.mil/whs/directives/corres/pdf/601013mp.pdf>
- Jansen, D. J. (2009, May). *Military medical care: Question and answers. Congressional research service report for congress*. Retrieved September 14, 2010, from <http://www.fas.org/sgp/crs/misc/RL33537.pdf>.
- Landon, H. M. (2009, February). *The effects of incentive programs on clinical productivity and quality* (Professional report). Air War College, Air University.
- Military Health Systems. (2010). *Evaluation of the TRICARE program: Fiscal year 2010 report to congress*. Retrieved September 14, 2010, from <http://mytoc.tma.osd.mil/downloads/TRICARE201006Eval.pdf>
- Naval Hospital Lemoore Instruction 5450.1S. (2009, February). Naval Hospital Lemoore (NHL) organizational manual.
- Naval Hospital Twentynine Palms 5450.1H. (2009, March). Standard organizational and regulations for Naval Hospital Twentynine Palms and branch clinics.
- Office of the Inspector General of the Department of Defense. (2003, July). *Financial management: Controls over DoD Medicare-eligible retiree health care fund investments*. Retrieved September 14, 2010, from <http://www.dodig.mil/audit/reports/fy03/03-119.pdf>.
- Tanielian, T., Harris, K., Suarez, A., Labor, R., Bradley, M., Atkinson, S., & Glassman, P. (2003). *Impact of a uniform formulary on military health system prescribers*. Retrieved September 14, 2010, from http://www.rand.org/pubs/monograph_reports/MR1615/MR1615.pref.pdf
- TRICARE Management Activity. (2009, August). *Military health system coding guidance: Professional services and specialty coding guidelines*. Version 3.2. Unified biostatistical utility. Retrieved September 14, 2010, from <http://www.dtic.mil/whs/directives/corres/pdf/601517p.pdf>
- TRICARE Management Activity. (2008, February). *TRICARE policy manual* 6010.57-M. Retrieved September 14, 2010, from <http://manuals.tricare.osd.mil/>.

Yancoskie, T. D. (2003). *Population demographics will size your facility sooner or later*. American Academy of Medical Administrators.

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